

lines 10-16). Acidified pasta is not in the least a snack. Column 2 of Barnes clearly describes a process for producing "a pre-cooked shelf-stable or refrigerated acidified pasta". Claim 1, the sole independent claim of Barnes, is solely directed to the production of "an acidified pasta product comprising...an edible acid" such as citric, fumaric, lactic, malic, acetic, tartaric, phosphoric (claim 5), sulfuric and hydrochloric (claim 6). These acids are hardly snack components.

It is submitted that Barnes is basically defective when applied as a primary reference against applicant's claims 8-11 to a process for producing grain-rich snacks in which the grain particles are held together by egg white (albumen) set as binder by contact with superheated steam. Moreover, Barnes' use of "saturated steam or steam at atmospheric condition, e.g. at a temperature from 85° to 100°C." (column 3, lines 25-26) is definitely not superheated steam. Applicant's specification discusses superheated steam at page 3, line 23 to page 4, line 10. Kindly note the last sentence: "High superheat also avoids any condensation of water on the snacks". Steam would condense as water on the snacks but to Barnes steaming and condensation on his acidified pasta actually helps his "contacting" the product with water (claim 1).

Besides the basic deficiency of Barnes as a reference against claims 8-11 because of the critical difference of steaming versus superheated steam, it is believed strained to say "nothing is seen that pasta cannot be a snack", especially that Barnes produces "acidified pasta", even with sulfuric or hydrochloric acid.

Egg material (whole eggs, yolks, egg white) may "if desired, be included in the ingredient mix" (top of column 3) of Barnes. For applicant's process (claims 8-11) egg yolks will not serve as substitute (equivalent) for egg white. To Barnes, egg white is an "if desired" option. To applicant, egg white is essential to his invention. The lack of Barnes' comprehension of applicant's use of egg white with superheated steam to set the egg white as binder of the snacks is highlighted by Barnes' only independent claim 1 which does not call for egg white as an ingredient of his acidified pasta. Not one of his 15 dependent claims mentions egg white.

Citing the Miller et al patent as bearing on applicant's use of superheated steam is respectfully believed wrong. Miller's invention is "drying the precooked noodles in a flow of high velocity air for less than 30 minutes and at a temperature above 45°C" (claim 1). Miller's 52 claims do not mention steam, much less superheated steam, or egg white. Miller even advises against superheated steam: "Super-heated steam is also somewhat dangerous and expensive to produce and utilize." (Column 3, lines 21-23). Miller goes on to say, "Further product flavor and palatability are not improved and noodles produced are rubbery and tasteless". No future infringer of claim 8 would ever use Miller in any combination of prior art to allege invalidity of claim 8. In short, Miller as secondary reference does not improve but worsens the rejection based on defective primary reference Barnes. Both references are not relevant to applicant's grain-rich snacks and it is not possible to draw any suggestions from these references that would lead to the invention set forth in claims 8-11.

All steam (saturated water vapor) is "pressurized" even if the pressure is merely a few inches of water column. Steam at any higher pressure is still saturated water vapor. Steam at a temperature of 350°C. would have the excessive pressure of about 2400 lbs. per sq.in. By contrast, 60-pound (gauge pressure) steam has a temperature of 154°C. and has heat added to it in the absence of water to become superheated steam. Thus, it takes 196°C. of superheat to reach a temperature of 350°C. Equal temperatures do not make steam and superheated steam equals, particularly for applicant's invention. Applicant is certainly not the first to require superheated steam because steam of equal temperature will not serve the same purpose. Engineering handbooks provide separate tables to show the different properties of steam and superheated steam at various increasing temperatures.

Claims 1-7 were rejected as being unpatentable over the combined references applied to claims 8-11 and further in view of Jones in view of Evenson et al. Jones and Evenson, individually as well as jointly, cannot correct the critical defects of Barnes and Miller as references in this application.

Jones is cited as showing the extrusion of a confectionery product made of polydextrose and egg white. The relation of Jones to applicant's grain-rich snacks made with superheated steam is indeed remote because Jones does not even use steam, or superheated steam, and his protein isolates are not the equivalents of grains used in applicant's snacks. Jones uses egg albumen as a "filler" (column 4, line 1 and 3).

Evenson fails to involve steam or superheated steam. Disclosure of egg white as a binder of oats could not be found in the Evenson abstract or in the cited portions of columns 4,5,8 and 12. However, even if egg white were mentioned, the reference is not relevant because applicant sets egg white as his binder with superheated steam.

Claims 1-7 define grain-rich snacks as:

comprising grain and a minor proportion of egg white
formed by press-forming a pasty mixture of the grain
and egg white, and
contacting the formed snacks with superheated steam
to set the egg white as binder.

As discussed, all four references present products that differ from applicant's snacks not only in type of product (e.g., acidified pasta of Barnes) but also in heating method (e.g., steaming of Miller).

Rejection of claims 1-7 because they are product by process claims is not enhanced by citation of In re Thorpe 227 USPQ 964 because that decision does not apply especially where the product can only be defined by the process steps by which the product is made or the process steps impart distinctive structural characteristics to the product (In re Garner 162 USPQ 221). Applicant's use of superheated steam effects almost instant setting of egg white as binder to yield a product that can only be defined by the process steps.

Claims 1-3 were rejected as being unpatentable over Zubin (Dairy-Free Cookbook, p. 299). Zubin's baking of a cake provides no tenable basis for denying the patent merit of claims 1-3 in which superheated steam is essential. It would be frightening to find any cookbook that advises the use of superheated steam. The Thorpe decision in no way supports the rejection of claims 1-3 based on Zubin.

To summarize, claims 1-20 have been shown to be clearly patentable in view of the critical defects of the five cited references when applied against those claims.

In view of the unusual breakthrough achieved by the invention, claims 21-26 are added to better protect the invention. Process claim 21 is narrower than claim 8 in requiring specific cooked grains. Product claims 25 and 26 have the format of Miller's product claims 30,38,42-44 and 52.

The detailed discussion of all the cited references and how applicant's invention patentably distinguishes thereover is believed to place the application in condition for prompt allowance. Such action is earnestly urged.

Respectfully submitted,


PAUL W. GARBO, Reg. No. 15,618

48 Lester Avenue
Freeport, New York 11520

Tel.: 516-378-0393
Fax.: 516-378-0435